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## WHY DOES OUR PUBLIC FAIL TO SUPPORT RESEARCH?

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WE have in our town a useful and patriotic citizen, sometimes suspected of having Irish blood in his veins, who formerly was a member of the State Senate. Many years ago, the president of the State University appealed to the legislature for a small fund in aid of research. Our senator, in the presence of the president and the students, humorously explained on a later occasion why the appeal failed. The president had made his speech to the committee on appropriations, and was listened to with due courtesy. But when he went out, one of the legislators spoke up: "Say, what *is* research?" Another replied, "D——d if I know," and a third proposed "Let's lay it upon the table." There it has rested ever since.

We all had our laugh, in which the president himself good-naturedly joined; but the query of the old farmer-legislator, "Say, what *is* research?" has remained as unanswered by the general public as it was in that committee-meeting. The public believes in education, and will support it up to a certain point. It has a good deal of regard for the sports, and is sure that football is one of the major functions of a university. But it is d——d if it really understands research, and unfortunately is likely enough to be damned eventually by that lack of understanding. Research and teaching are the twin functions of the university, but we are told that teaching is the prime necessity of the day, and research can wait. Actually, it does not wait. We do what we can, as best we can, and for the rest depend for our knowledge on the activities of other states and nations. Intellectual parasitism is so easy, in the sciences or the arts. The world does move, so why not ride upon its back?

Yet the other extreme, of complete intellectual independence, would be much worse. We must of necessity be part of the great body of science, but it should be a living part, not some shell-like external secretion. No state, no city, can afford to be left out of this movement; the eventual penalty is inability to even profit by the work of others.

It should be a matter of personal and social pride. It is of incalculable advantage to any state to belong to the Union, but in the present condition of public opinion there are some disadvantages. If Colorado were a nation, she would as a matter of course have strong institutions for scientific research, and would publish the results of investigations made by her citizens. Being only a state, she is cheerfully willing to see these activities center in other parts of the country, and has little idea of squarely shouldering her own burden. One can easily imagine, and can even find in various countries, excessive local pride leading to absurd results. Our extreme modesty (is that the word?) is not wholly bad. Yet the problem of the states is something like the problem which confronts many of our educated young women. They might fly, could they only believe themselves to possess the wings. Long ages in the apterous condition have produced an inhibition scarcely to be overcome. Yet it will be overcome, in both cases, in the fullness of time.

It is unreasonable to expect the demand for intellectual achievement to develop abundantly among the masses. Reforms start with individuals rather than with multitudes. If we are really to progress, the universities and the men in them must show the way. They must press their cause with so much zeal and sincerity as to convince their students, and their students' students. The torch of Agassiz is growing dim, but it has burned brightly through more than one generation. One looks into the faces of nearly two thousand young men and women at assembly, and thinks, if they all *cared* enough, what might they not do? If they cared for their country and their fellows enough to work and think, year after year, how to make America what America once meant to be!

They don't care like that, and we don't. The stream will not rise higher than its source. If we could do no better, this argument would be wasted ink. But as William James used to say, we practically all of us have unrealized reserves of force. We found that out in the war, and should not forget it in peace. The power is there, both material and spiritual, and only the stimulus is lacking.

I have little respect for the methods of the revivalist, and should regard with grave suspicion sudden conversions to the religion of science. One has to grow into it, and up to it. Yet it is absolutely certain that such growth will only occur in adequate quantity under favorable conditions. It is nonsense to say that the scientific man must be a genius, and as such will defy

the very gods to win a footing. He is usually a man (or woman) of rather ordinary ability, somewhat above the average, who will work when suitably fed, housed and clothed. He wishes to be understood and appreciated, and get due credit for what he does. He does not demand riches, but he is jealous of his rights, and has a sense of justice. All of which is to say that he is a normal American citizen, and desires to be taken as such. He appreciates the indescribable romance of science, the triumphs of discovery, the dawn of new ideas; but all this is part of life, and may come to the merchant, the artist or the farmer, if in somewhat different form. Scientific research is not a thing isolated; it is part of the necessary work of the world, and when once that is understood, it will take its place along with our other normal activities.

We of the university do not appreciate this. We hear it said, and repeat the saying, that one who has the true research spirit will make discoveries, if he has to take the night hours and holidays to do it. It is true enough, but suppose we reverse the picture for a moment. Suppose we imagine a university given over to research, but with students as at present. Professors are paid to do research, and called to account for it, but they teach when they can, or feel inclined. Oh well, if a man has the true teaching spirit he will gather a following, and so the youth will be instructed! The history of the world proves that; Jesus Christ, the greatest of all teachers, got no pay but the cross. Admit all this, and it remains evident to the least intelligent that the education of a democracy can not be left to the occasional influences of spirits too insistent to be crushed. Indebted as we are to the inspired, most of our knowledge and training must come through much more prosaic channels.

No one doubts this, in regard to education. Once there used to be a doubt, but it has long since passed away. We have an educational program, which actually suffers from excess of system. We have gone to one extreme with regard to education, to the other with regard to research. We have no research program. The administration receives no reports on research, and asks no questions regarding it.<sup>1</sup> No one on the campus can tell accurately what the research activities of the university are. Is it therefore remarkable that the public does not know, and legislators possibly think of research as a scheme to give lazy professors more time to loaf? It would be horrible to have

<sup>1</sup> Plans for reform in these matters are under consideration in the University of Colorado.

research administered by a stiff and unintelligent machine, but is that any reason why it should be left to shift for itself unaided? The fault, of course, is not peculiar to any one institution or locality. In some degree it even represents an exaggerated virtue, that of recognition of the independence of the investigator. It is not easy to reach optimum conditions or practices, in teaching or research, but without a certain efficiency in both our democracy can not be adequately maintained.

With a definite program, sufficient means for publication, and dignified arrangements for publicity, I believe there would be no great difficulty in obtaining the support of a majority of the citizens. When it becomes apparent that science can create wealth, banish disease, and illumine the mind, it will be regarded as the indispensable friend of mankind. Scientific writings will themselves become a prime factor in the education of citizens, not simply on the campus, but all over the country and at all times. But it is not sufficient to preach the virtues of science in general. People must be shown in detail, in a thousand ways suited to their particular needs and interests. Hence the propaganda, if we may so designate it, must be in the hands of the scientific men themselves. They alone know the facts, and can speak with conviction.

The problem is not one of finding support for a certain number of research workers. If there were no opportunities for research, the majority of potential investigators would turn to something else, and probably attain greater material prosperity. The problem is, to create and maintain a service, without which civilization will stagnate, and eventually decay. Those who have faith in science do not believe such an outcome possible, but look forward to continually accelerated progress, and the removal of many of the greatest evils which distress mankind.